EQ Review

Educational Quality in the Developing World

*EQ Review is a newsletter published by USAID's EQUIP1 to share knowledge about issues fundamental to improving educational quality and to communicate the successes, challenges, and lessons learned by USAID Missions.*

**October 2004** **Vol. 2, No. 4**

# Distance Education

## Information and Communication Technologies and Distance Education

The image of a global village fueled by instantaneous worldwide communication suggests the conquest of technology over distance. Great distances and other geographical barriers continue, however, to present steep challenges for the delivery of educational development programs. The rise of the information and communication technologies (ICTs) driving the establishment of the so-called global village has naturally led development leaders to consider new ways to bridge the distance divide. Distance education is the delivery of educational content through some combination of media to learners removed from the instructor(s).

At the primary and, to a lesser extent, secondary levels, distance education and ICTs are increasingly being used to improve educational quality. Where teachers have low knowledge in the subject areas they teach, quality content can be delivered. Where teachers use rote learning methods, media such as self-guided print materials, interactive radio instruction, or instructional television can provide learners with active, student-centered lessons. Using these principles, well-managed distance education programs have been shown to increase learning gains, often helping to overcome urban vs. rural and male vs. female learning gaps.

Distance learning programs increasingly benefit teacher professional development as well. Pre-service and in-service teachers can receive direct instruction, access more educational resources, increase peer-to-peer interaction (via internet or wireless phone connectivity) and hone newly learned pedagogical techniques through regular practice in the classroom (via print materials, interactive radio instruction or instructional television), all supported by the use of ICTs. Poorly qualified teachers can continue to work while they access distance learning rather than undergo the financial and opportunity costs of attending full-time teacher education.

Distance education is also cost-effective. Distance-based teacher education programs have been shown to operate at one-third to two-thirds the per-student cost of conventional programs; a number of studies show the per-graduate cost, though not as impressive due to a relatively high number of dropouts, still reduced. Programs to improve educational quality often involve an add-on cost, but learning gains can usually be achieved at a lower per-student investment than through more conventional interventions: $3 to $8 for radio, approximately ten times more for television, and $72 to $98 for computers[1].

In order to achieve positive learning results cost-effectively, distance education programs must heed lessons learned. Learners need to receive adequate support, often through teachers or facilitators educated and supported specifically in the educational methodology being promoted and in the use of the distance media. The curriculum and materials must be high in quality and responsive to local educational needs and culture. Political commitment to the program must be solid, and demand must be kept in place by providing a quality product and demonstrating its effectiveness to learners, their families, and governments.
Finally, the program must be well designed to provide for sustainability in at least three ways: through a focus not on providing hardware but on meeting learning goals and fitting into and enhancing the wider educational system; through building capacity within the host country; and

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## Namibia: Improving Teaching and Scholarship in Rural Schools

In a country as vast as Namibia, rural schoolchildren are rarely able to glimpse the world beyond their remote, isolated villages. Quite often, rural schools lag behind the achievement levels of their urban counterparts. One reason for the learning differential is that the sheer distances of these schools from urban centers pose a challenge for teacher recruitment and professional development. Another related problem is the lack of access to technology and information.

In an effort to bridge this gap, USAID/Namibia, in partnership with Discovery Channel Global Education Partnership, Namibia's Ministry of Basic Education, Sport and Culture (MBESC), MultiChoice Namibia (the local satellite TV service provider), the Africa-America Institute, and Discovery Communications, Inc., established the Learning Center project in Namibia in 2003. Through the provision of technology, training, and customized educational video programs, the Learning Center project seeks to improve educational opportunities for communities that have little or no access to information available via television and satellite. The project complements and enhances the existing curriculum and provides a powerful tool for teachers in their classrooms.

The Learning Center project consists of three main components. First, the Partnership provides a TV, VCR and satellite dish to existing under-resourced schools. Second, the Partnership produces educational videos specially created through collaboration with local educators and communities, and makes available information via video and satellite that meets the communities' needs.

Finally, the project provides three years of instruction and monitoring for teachers in the effective, interactive use of TV and video to complement local curricular objectives. Teachers are taught how to use student-centered teaching methods such as pre-, during-, and post-viewing activities to engage students in the learning process. Teachers also receive instruction on downloading and recording digital satellite TV (DSTV) programs for educational use. MultiChoice Namibia provides a free educational DSTV bouquet to each Learning Center. In addition, the Learning Centers become "information hubs" open to communities after school hours, where they use the resources to enhance workshops on topics such as HIV/AIDS, other health topics, and women's issues.

To date, 18 Learning Centers serving nearly 16,000 students have been established in nine under-served rural regions in Namibia, and more than 370 teachers have been instructed in the use of TV and video in the classroom. Namibian teachers report several advantages of using TV and video in the classroom. Attendance has increased in their schools and they observe greater motivation among their students. The video and DSTV programs help students to better understand abstract concepts in mathematics and physics, among others. Teachers also say that the Learning Center methodology has increased their enthusiasm for teaching, and they appreciate having new sources of information to share with their students.

Teacher Alpha Lichacha uses a Global Education Partnership video to explain the solar system.

Schools with the Learning Center project report increased parental involvement in the schools and in their children's educations. Since the television is a novelty for the rural communities, many parents even request that they be allowed to sit in on their children's classes so they can see how the TV is being used in class.

Namibia's Ministry of Basic Education, Sport and Culture recognizes the importance of using sustainable technology to assist in the delivery of a quality education. Televisions are simple to operate and have no expensive running costs, making them an ideal, sustainable technology for rural settings. The Learning Center project is working toward these goals, not just in the provision of technology and relevant content, but also in helping to bridge the information divide and to improve educational opportunities for hard-to-reach populations.

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> To read more about the Learning Center project in Namibia, please visit http://www.discoveryglobaled.org/projects/namibia.html.

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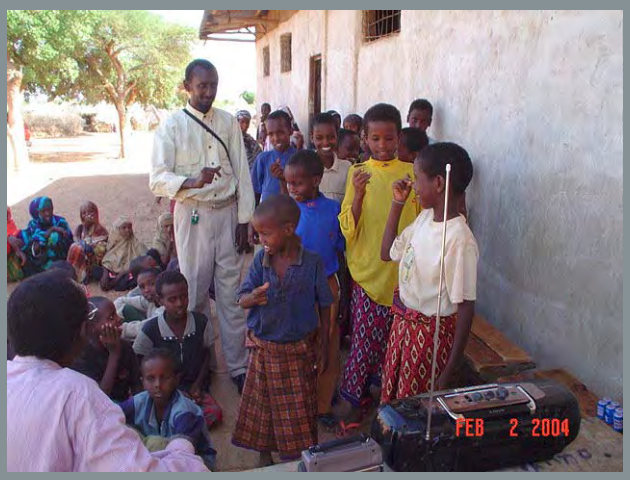
## Horn of Africa: Interactive Radio Supports Quality Instruction for Somalis

Conflict, drought, refugee movements, and neglect have contributed to widespread poverty in eastern Ethiopia and made the provision of basic services, including education, rare. Just eight percent of children attend formal schools, and few of them have instructional materials or well-trained teachers. Vast distances and poor infrastructure present major obstacles to improving the educational situation. The predominantly Somali population of the region is largely pastoralist, moving from time to time across the desert with their herds, and radio is a nearly omnipresent medium of communication among these communities.

The convergence of multiple challenges to education and the opportunity presented by extensive radio use gave birth to the Interactive Radio Instruction for Somalis (IRIS) program, funded by USAID/Ethiopia and developed by local Somalis with the collaboration of Education Development Center, Inc. (EDC). Thanks to the program, now part of a larger project called Focus, Somali children, parents and teachers in Ethiopia are engaged in learning via interactive radio instruction (IRI), a distance education model using radio programs to provide structured lessons for teachers and learners to follow.

After researching audience achievement levels and culture, selecting locations for IRI, training teachers to lead children through the lessons, and writing and producing 40 first-grade reading lessons, the program began thrice-weekly broadcasts of "Radio Mustaqbal" (Radio of Our Future) in January, 2003. The series now features 80 reading lessons and will soon include mathematics for first grade and a whole new series for second grade. Programs are recorded locally in Somali and incorporate Somali stories, music and poetry. Content related to conflict resolution and prevention, health, civics and coping with drought is woven into dramas within the programs.

In formal classrooms, non-formal basic education centers and Quranic schools, and even under trees, teachers and students have listened and learned through the use of poems, songs, games and activities led by lively characters including Fadumo, a caring teacher, and Samsam, an inquisitive girl. The lessons are designed to encourage listener responses to the radio characters as well as interaction between teacher and students and among the students. While the students learn from the programs, the teachers—or facilitators where no teachers are available—also receive training in engaging, interactive teaching methodologies.




Students actively participate in an IRI lesson with teachers.

Since the start of the programs, attendance and time on task have increased markedly and parents actually come to school with their children. Teachers also report that they appreciate having an "assistant" teacher (the radio teacher) in the classroom and that they use many of the methodologies they learn through IRI in their regular classroom teaching.

The program will soon be expanded under a new initiative through USAID/REDSO entitled Enhancing Education in Schools through Interactive Radio Instruction for Somalis. This expansion activity will allow for shortwave broadcasting that will cover schools in parts of Somaliland, Somalia, Ethiopia and Djibouti where there are Somali speakers.

In these regions, various obstacles have long limited options for providing quality education. With the support of IRI, however, for a growing number of Somalis, overcoming many of the obstacles now begins with turning the switch on the radio.

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## Peru: ICTs Enable Active Learning and Communities of Practice

In Peru's education system, which has relied primarily on teacher-centered instruction, schools are taking advantage of information and communication technologies (ICTs) to develop collaborative learning projects and establish virtual communities of practice among teachers. A USAID/Peru program, 'Strengthening Teaching Practices through Information and Communication Technologies' (CAPTIC), supports these efforts to learn and use technology in the service of instructional innovation. CAPTIC is implemented through dot-EDU, an initiative funded by USAID that seeks to improve education quality and access through the use of ICTs.

As part of this pilot program, teachers at sixteen rural primary schools and teacher education centers that participated in the Ministry of Education's Huascarán Project, receive instruction and on-going support in project-based pedagogy enhanced by the use of computers. Teachers learn to develop, together with their students, inquiry-based projects arising from students' natural curiosity, often use computers to help complete the projects, and post the results of the projects on the CAPTIC website. The centers, located in three geographically distinct regions, address the specific needs of each locale, including linguistic differences, geographic distance, limited infrastructure, and insufficient computer skills. CAPTIC recognizes that regardless of the specific obstacles they face, participating teachers will need intensive support early in the process to begin to develop new habits using technology and collaborative, student-centered pedagogy.

Workshops introduce teachers to the technology and provide them with personalized technical guidance in application of the technology to create classroom-based collaborative projects that encourage students' active participation. On-line meetings with participating teachers and project staff also allow the teachers to share experiences, provide feedback on peer projects, and use each other as resources to resolve challenges that arise. In this way, communities of practice develop despite the distances between project sites. The teachers also received education about gender equity in relation to ICTs to help ensure a fair use of technology for all students.

CAPTIC strives to ensure that participants are not so taken with the new technologies available to them that they lose sight of the program's objectives. "What we need to ensure is that the technology supports quality education," explains Project Director Sonia Arias, "and doesn't unwittingly replicate outdated models of learning."

So far, this dynamic program design has received positive feedback from participating teachers. While the teachers initially had a difficult time mastering the concept of project-based pedagogy, they are taking advantage of the technical support offered them in order to improve. Alipio Luis Carhuallanqui, for example, addressed fellow teachers about his reaction to the project during a recent online discussion, "I felt the desire and the motivation to communicate with you, to go online and read your comments. The comments felt alive and made me laugh and reflect…." The project web site exhibits further evidence of the active participation of teachers and students and provides links to collaborative projects developed for the group by individual participating schools.

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> Please visit the CAPTIC website.

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through planning for the funding of low to moderate, but important, recurring program costs. Distance education programs taking these factors into account have lasted for decades, but continued study is needed, particularly on programs using newer technologies.

The growing investments in ICTs for distance education in the developing world reflect a desire to connect learners to information-based economies and to use the most appropriate available technologies to make their learning more effective. If those investments are wise, they can result in quality education for more learners and promote a more equitable global village.

> For more information, please contact Stephen Anzalone at sanzalone@edc.org.

[1] P. Murphy, S. Anzalone, A. Bosch, J. Moulton. "Enhancing Learning Opportunities in Africa: Distance Education and Information and Communication Technologies for Learning." World Bank, March 2002.

*EQ Review* is a free publication created by the Educational Quality Improvement Program (http://www.EQUIP123.net) and the U.S. Agency for International Development (USAID) under cooperative agreement # GDG-A-00-03-00006-00.

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